

less toward the most infected region, this can be removed. If a perforation or suppuration is encountered, the usual methods are adopted to contend with it.

The Technique of Operative Closure of the Intestine.—VOECKLER (*Zentralbl. f. Chir.*, 1911, xxxviii, 1179) has been employing for some time the following method of closing the intestine opened by operation, as the duodenum after resection of the pylorus, and after all resections of the intestine, when a side to side anastomosis is to be made. The intestine is first freed from its attachment to the mesentery, and a purse-string suture of catgut, including the serous and muscular coats, is introduced in the circumference of the intestine near the place where it is to be divided. About 1.5 cm. from this suture, somewhat farther in the large intestine, the gut is divided between the blades of an intestinal clamp. A strong silk ligature is employed to close the open end of the intestine beyond where the purse-string suture is placed. This is tied with a slip knot so arranged that when the now closed end is inverted and the purse-string suture tied, by holding the end of the intestine with the finger and thumb of one hand and making a tug on the silk ligature it will unloosen at the slip knot and come out. As this is being done the purse string is being held ready to be tied as soon as the silk ligature is removed. After double knotting, the purse-string suture is cut short, and may then be covered over by a Lembert suture. The advantages of this method are as follows: No closed space is left at the end of the intestine between the two ligatures in which infected material can accumulate. The same danger arises when the enterotribe is employed. No foreign body is left in, as from the ligature or the crushed portion of the intestinal wall from the use of the enterotribe, which becomes necrotic. The method is simple, is carried out quickly and without special instruments. Voeckler observed no signs of hemorrhage from the untreated, divided mucous membrane.

Local Anesthesia in Operations on the Trigemini Region.—BRAUN (*Deut. Zschr. f. Chir.*, 1911, ci, 321) says that the addition of adrenalin to cocaine solutions permits us now to operate under local anesthesia from injection of the larger nerve trunks in parts of the body where a tourniquet cannot be applied. The substitution of novocain for cocaine, permits us to inject a much larger quantity of the anesthetic fluid in the neighborhood of the nerve trunks without danger. Braun believes that in no place in the body will local anesthesia produce so great an advance as in operations on the trigemini region. The technique for reaching the various branches is fully discussed. The advantages of local anesthesia in these operations are as follows: Resection of the upper jaw loses almost all its horrors and dangers, and becomes an entirely different operation from that under general anesthesia. No preliminary operation is necessary, neither a tracheotomy nor a ligation of the common carotid. Nor is the Kuhn tube necessary, since little or no hemorrhage occurs. As the surgeon is not obstructed by the anesthetist, he can work unhindered to the end of the operation. After the operation the patient is as fresh as before, and is absolutely not collapsed. For tongue operations and

excision of the lower jaw the advantages are the same. Braun has done these operations for two years under local anesthesia without exception. The anesthesia and freedom from blood of the operative field were always complete, narcosis never being necessary. No patients died as the result of the operation. Of 8 cases of resection of the upper jaw, and of 12 operated on for cancer of the oral cavity, 2 had postoperative complications, a very small percentage. For injections into the orbit and the pterygopalatine fossa, no special dangers are associated, and there is no need of fear of wounding the vessels.

A Contribution to the Pathology of Renal Calculi.—ROSENBACH (*Deut. Zschr. f. Chir.*, 1911, ci, 556) made a study of this question based upon experimental work on dogs. Renal calculi, as Elbstein and many others have shown, are formed by the collection together, of organic and inorganic material. For the formation of stones which give clinical symptoms, the *sine qua non* is a condition in which there is an increase of salts in the blood, a "diathesis." In this respect authors are agreed. On the other hand, it is known that this alone is not sufficient for stone formation. Clinical experience shows that in gout ("uric acid diathesis") the oxaluria, phosphaturia, and cystinuria, in most cases do not lead to the formation of calculi. In Rosenbach's opinion, the second factor in the formation of stone is to be sought not in the kidney itself, but in the blood. According to this suggestion, renal calculus is not a surgical condition. We may hope that the dissolvent work of the kidney may be aided by the ingestion of sufficient water. It would be the ideal method if, after the removal of the diathesis, the kidney could deal with the calculus alone. But severe and irreparable changes in the kidney may have been caused by the stone, so that surgical as well as internal therapy will be justified. The damage to the parenchyma will not be much increased by the operation, while by the removal of the obstruction an existing infection is permitted to heal.

A New Method of Operating for the Gastric Crises of Tabes.—EXNER (*Deut. Zschr. f. Chir.*, 1911, ci, 576) operated on one case by Förster's method of dividing within the spinal canal the sensory roots of the tenth, eleventh, and twelfth dorsal spinal nerves. For four weeks after the operation the patient was free of trouble. Then the vomiting returned, but without the girdle sensation and without the pain accompanying the gastric crises. After a study of the question, Exner concluded that the vomiting is the result of the gastric movements which are controlled by the vagi, and that in some cases at least the primary cause is an involvement by the disease of the vagus or its centre, and that the pain is secondary to the vomiting. It has been shown by animal experimentation that not only is the vagus the motor nerve of the stomach, but that its division leads to pathological changes in its walls, as ulcers. Exner decided to divide the vagi at the cardia, before they gave off their branches to the stomach, and, in order to prevent the gastric complications, provide a gastrostomy through which a perforated drainage tube could be made to pass the pylorus into the duodenum. This was done to overcome the pyloric spasm that results reflexly from excess of acid con-